



# Australian Bureau of Statistics

## **1351.0.55.039 - Research Paper: Investigating the Discrepancy between Measured and Self-Reported BMI in the National Health Survey, Mar 2012**

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## Summary

### About this Release

Body Mass Index (BMI) is commonly used to measure the prevalence of obesity in populations for health research. Population surveys often ask respondents to report their height and weight, rather than taking physical measurements. Previous research has shown that the discrepancies between self-reported and measured values of height and weight can lead to inaccurate estimates of the population BMI distribution. The accuracy of estimates derived from self-reported BMI data can potentially be improved by adjusting the self-reported values to account for these reporting biases.

In this paper we investigate the reporting errors in height, weight and BMI of Australian adults using the National Nutrition Survey (NNS) 1995 and National Health Survey (NHS) 2007–08. Both surveys collected measured and self-reported height and weight. Linear and semi-parametric regressions are used to adjust self-reported BMI in NHS 2007–08, and the resulting BMI distributions are compared with the distributions of measured and self-reported BMI.

The results confirm that, on average, respondents overestimate their height and underestimate their weight and BMI. However, the magnitude of the misreporting was significantly smaller in the NHS 2007–08 than in NNS 1995. Adjusting self-reported BMI is found to provide significantly more accurate estimates of the distribution of BMI than using self-reported BMI directly. However, more data are necessary to assess whether the levels and pattern of misreporting have stabilised such that actual BMI can be accurately predicted from self-reported data using modelling.

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